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VOL. XLVIII.

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Memoirs of the Museum of Comparative Zoölogy

AT HARVARD COLLEGE.

VOL. XLVIII.

REPORTS ON AN EXPLORATION OFF THE WEST COASTS OF MEXICO, CENTRAL AND SOUTH AMERICA, AND OFF THE GALAPAGOS ISLANDS, IN CHARGE OF ALEXANDER AGASSIZ, BY THE U. S. FISH COMMISSION STEAMER "ALBATROSS," DURING 1891, LIEUT. COMMANDER Z. L. TANNER, U. S. N., COMMANDING.

XXXVIII.

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XXXI.

THE ANNELIDA POLYCHAETA.

By RALPH V. CHAMBERLIN.

WITH EIGHTY PLATES.

PLATES.

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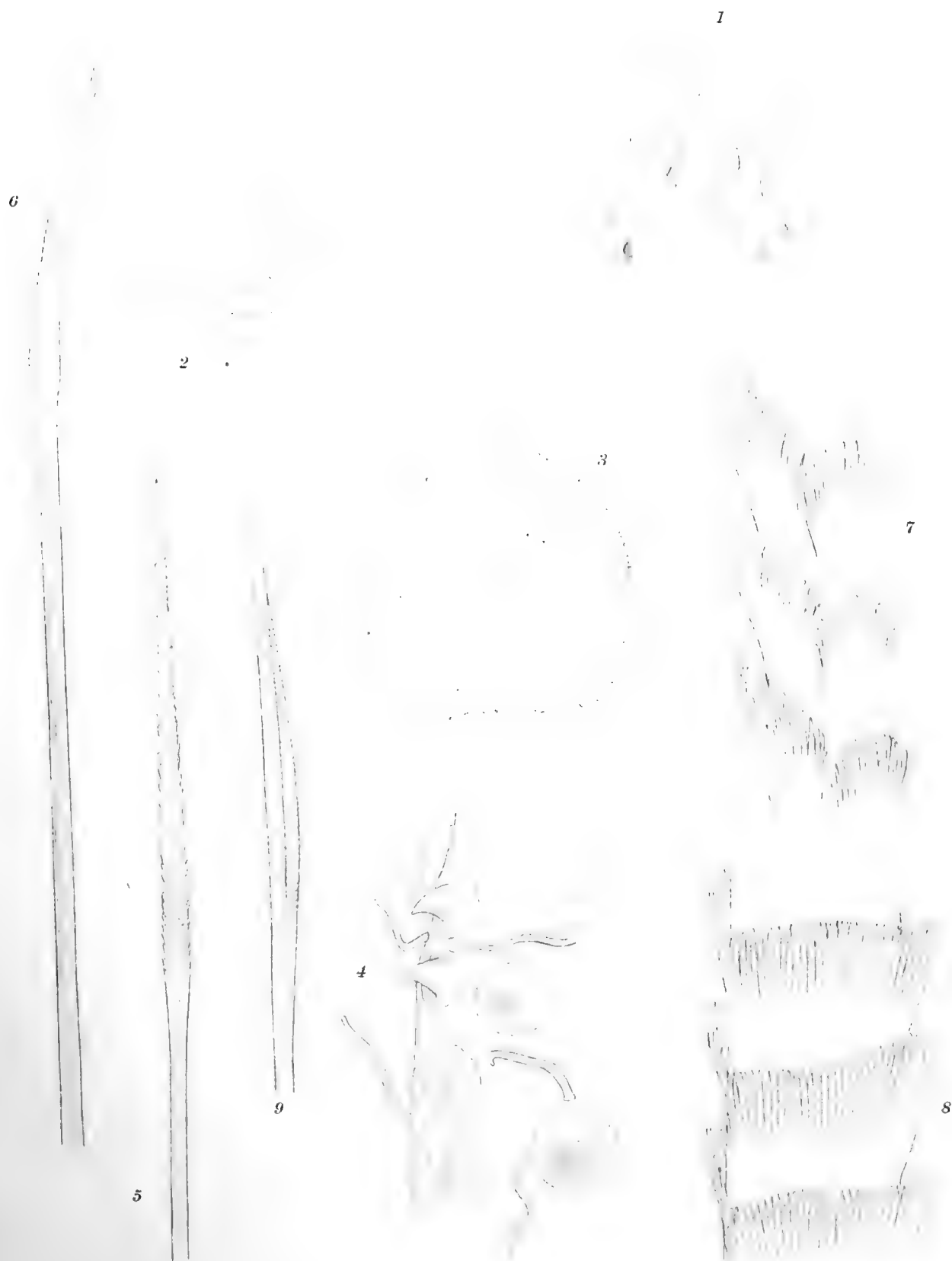


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PLATE 2.

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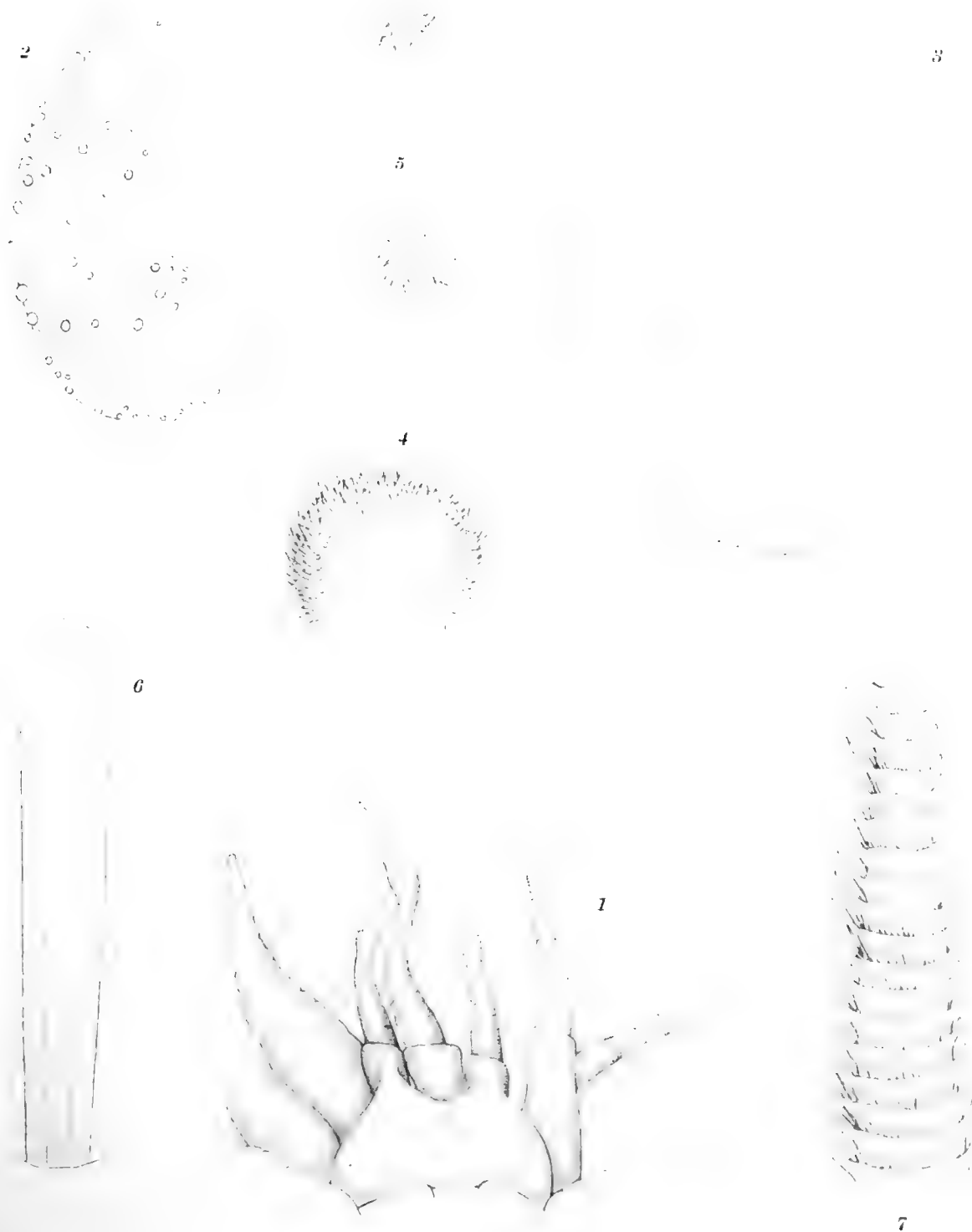


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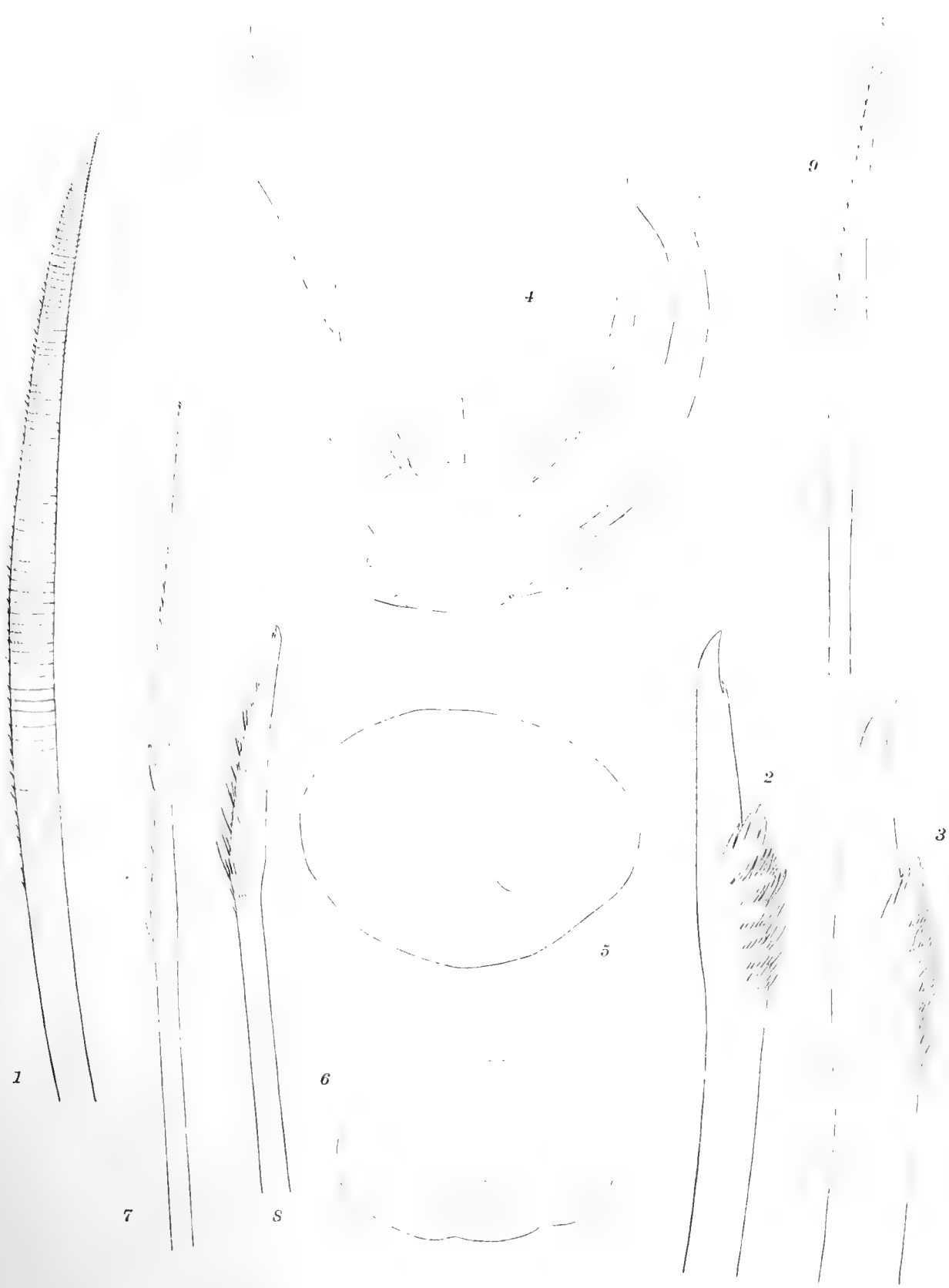


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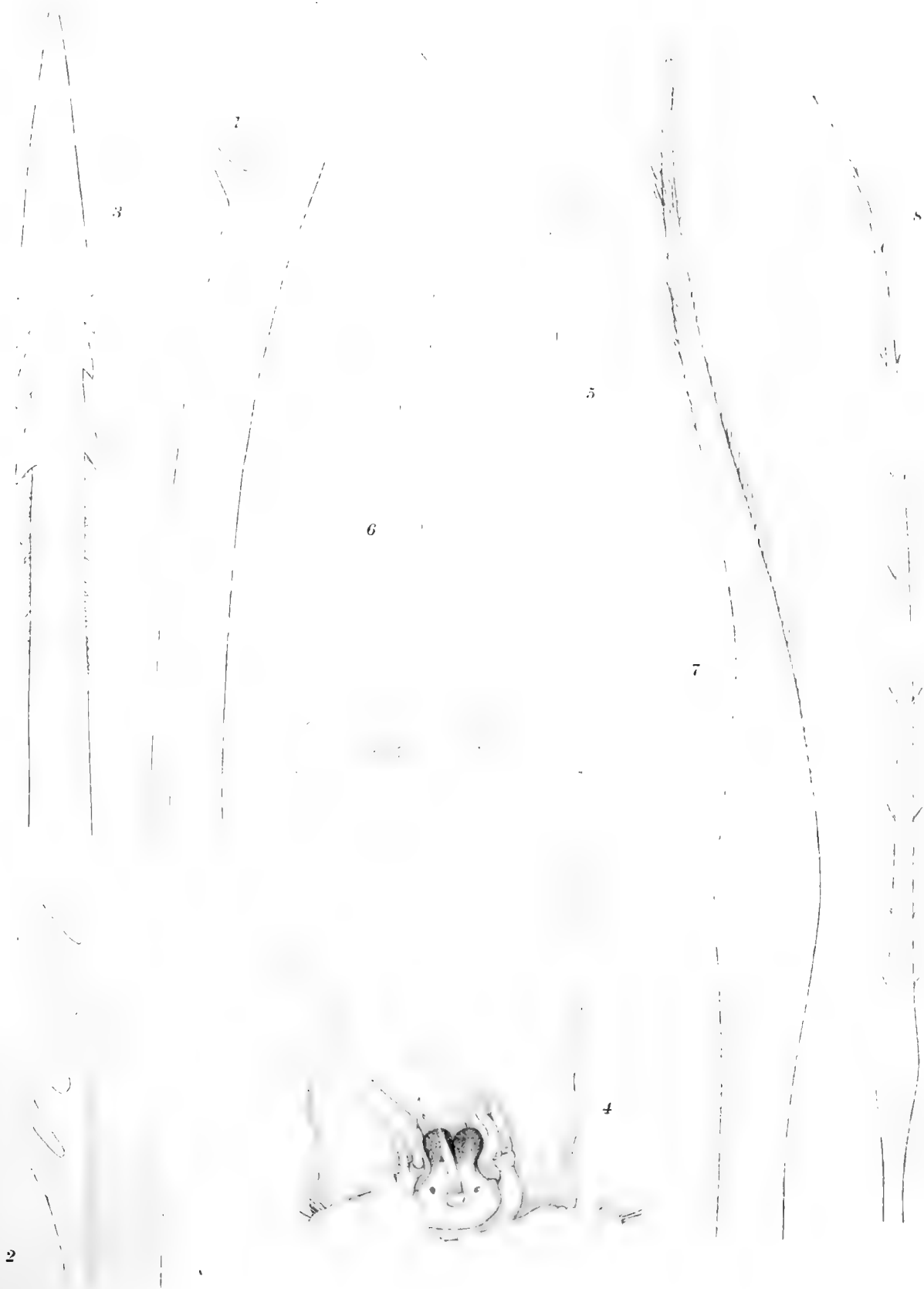


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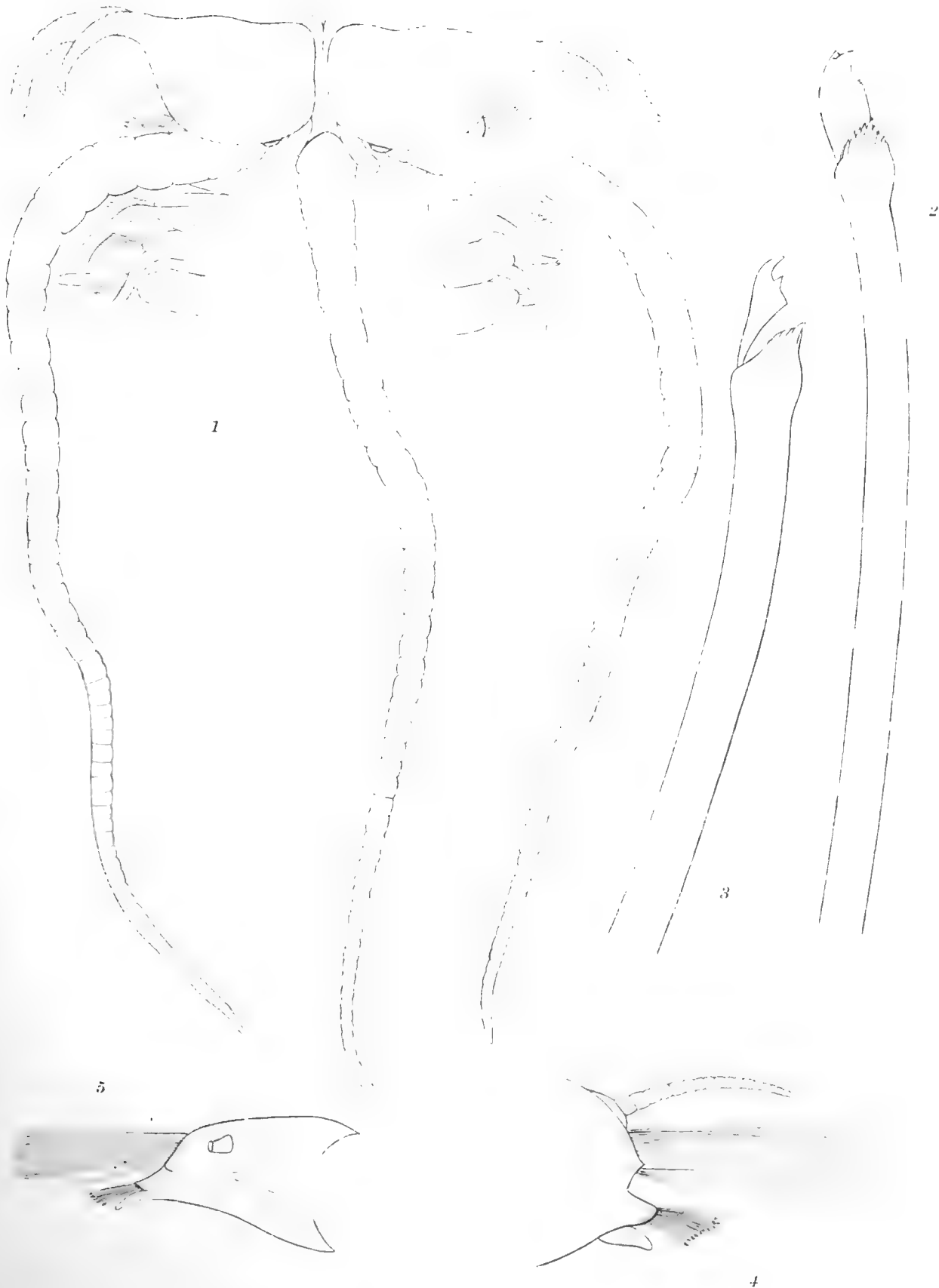


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PLATE 23.

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PLATE 24.

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PLATE 25.

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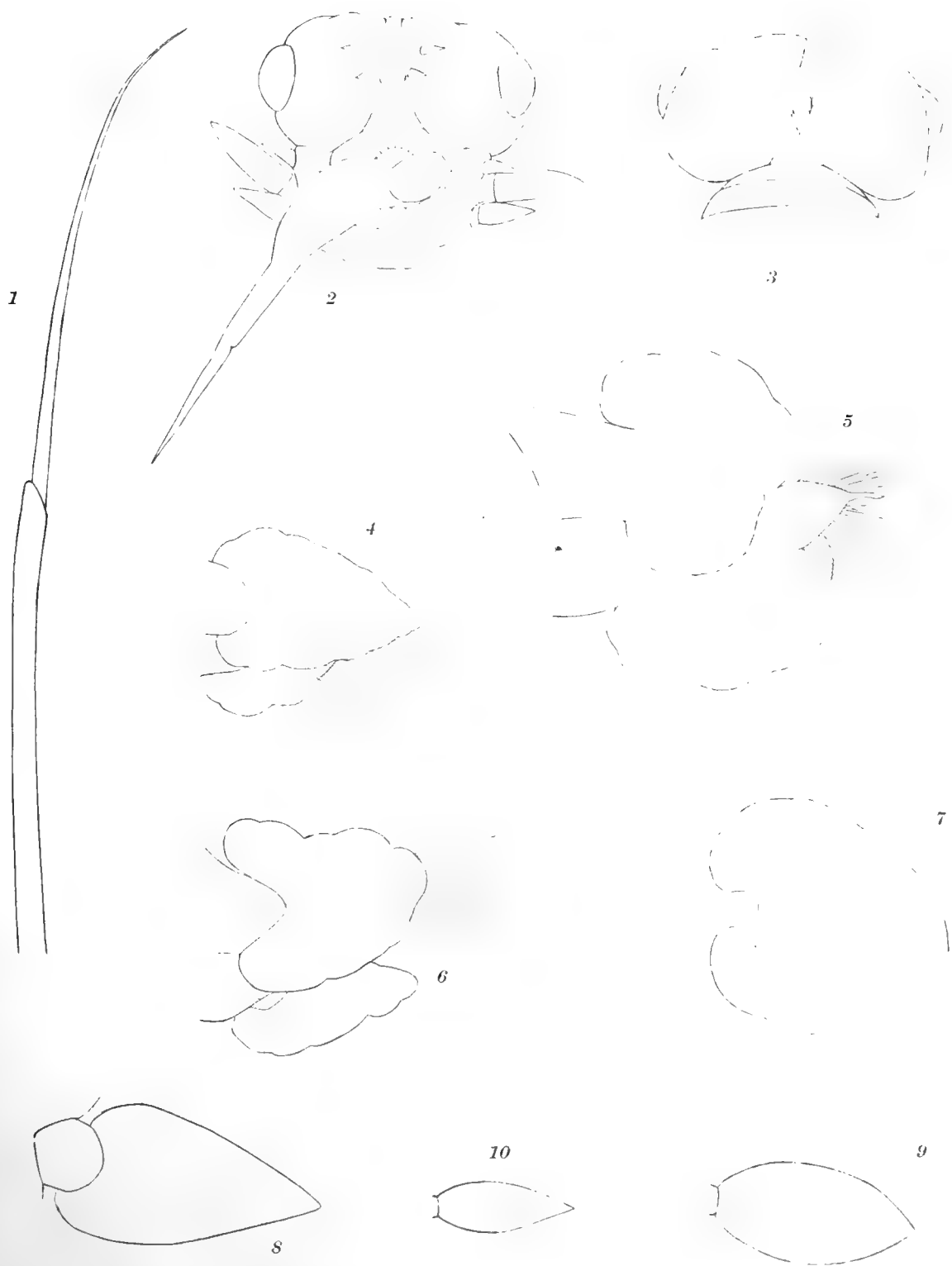


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PLATE 26.

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PLATE 28.

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PLATE 29.

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PLATE 30.

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- 6.— Neuropodial seta (heterogomph of second type) from eighth parapodium of epitokous female,
 $\times 1075$.
- 7.— Distal portion of natatory seta from middle region of body. $\times 278$.
- 8.— Tip of blade of same. $\times 1075$.



PLATE 31.

PLATE 31.

Platynereis polyscalma CHAMBERLIN.

Figures 1-10.

- 1.— Anterior region of epitokous female, ventral view. $\times 45$.
- 2.— Anterior region of epitokous male, ventral view. $\times 45$.
- 3.— Left maxilla of epitokous female, ventral view. $\times 45$.
- 4.— Left maxilla of epitokous male, ventral view. $\times 45$.
- 5.— Seventh parapodium of epitokous male. $\times 63$.
- 6.— Eighth parapodium of epitokous male. $\times 63$.
- 7.— Penult parapodium of epitokous male. $\times 96$.
- 8.— Ultimate parapodium of epitokous male. $\times 96$.
- 9.— Distal portion or ridged seta from ultimate parapodium (viewed a little obliquely to broad surface).
 $\times 1075$.
- 10.— Distal end of shaft of homogomph notopodial seta of epitokous female. $\times 1075$.

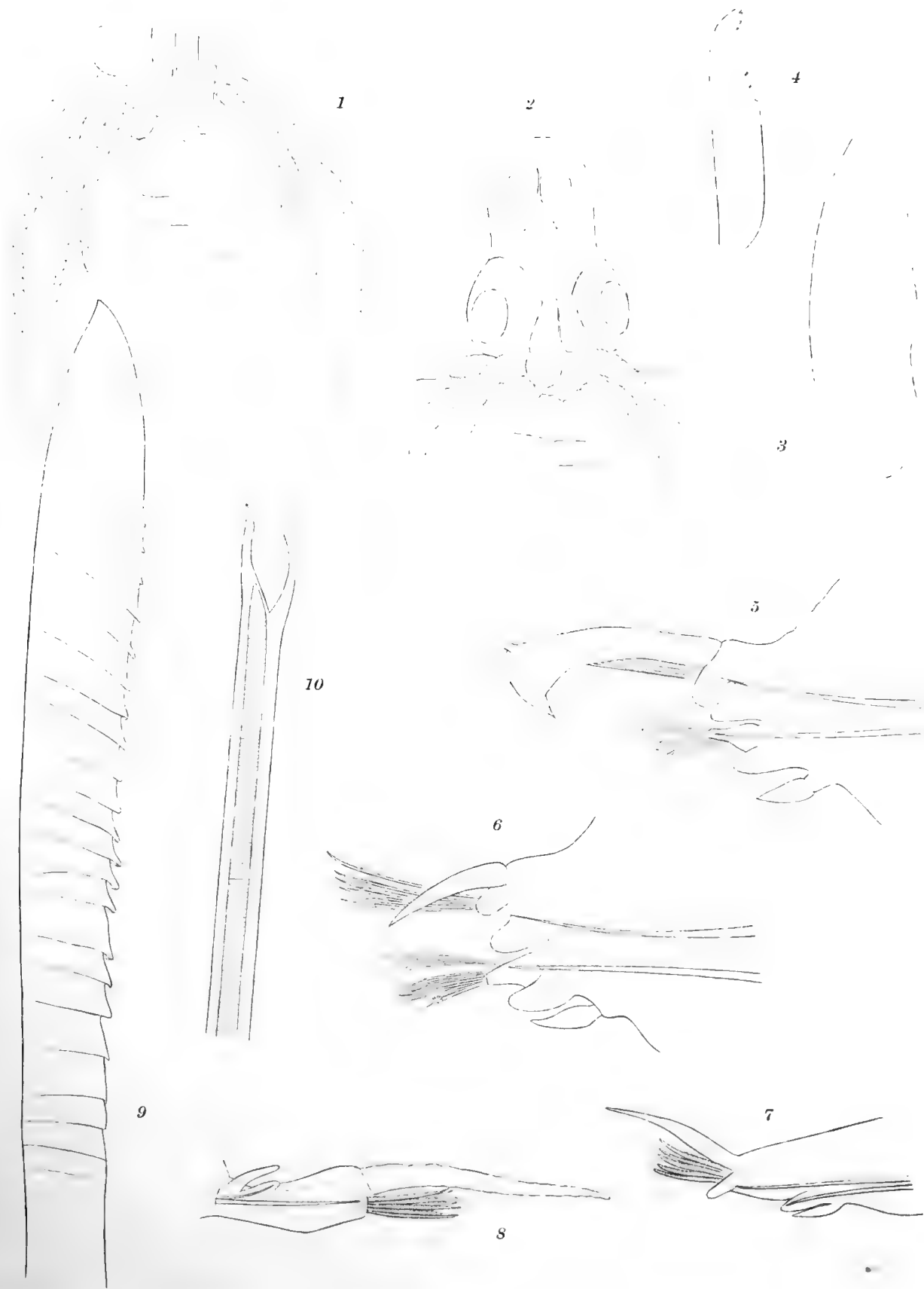


PLATE 32.

PLATE 32.

Platynereis polyscalma CHAMBERLIN.

Figures 1, 2.

- 1.— Parapodium from middle region of epitokous female. $\times 63$.
- 2.— Parapodium from caudal region of epitokous female. $\times 96$.

Nereis segrex CHAMBERLIN.

Figures 3-5.

- 3.— Parapodium. $\times 27$.
- 4.— Socket and adjoining parts of homogomph seta. $\times 1075$.
- 5.— Distal end of neuropodial heterogomph. $\times 1075$.

Nereis leuca CHAMBERLIN.

Figures 6-8.

- 6.— Distal end of falcate neuropodial seta. $\times 1075$.
- 7.— Falcate heterogomph of second type from same preparation as the preceding. $\times 1075$.
- 8.— Natatory notopodial seta from parapodium of middle region. $\times 278$.



PLATE 33.

PLATE 33.

Nereis leuca CHAMBERLIN.

Figures 1-6.

- 1.— Anterior end, dorsal view. $\times 45$.
- 2.— Fourth parapodium, epitokous male. $\times 63$.
- 3.— Sixth parapodium, epitokous male. $\times 63$.
- 4.— Parapodium from middle region of posterior division of epitokous male. $\times 63$.
- 5.— Notopodial seta, distal end, from sixth parapodium. $\times 1075$.
- 6.— Neuropodial homogomph with tip of the shorter type from fourth parapodium. $\times 1075$.

Nereis caenocirrus CHAMBERLIN.

Figures 7, 8.

- 7.— Falcate seta from fourth parapodium. $\times 1075$.
- 8.— Cirrus of thirtieth parapodium, dorsal view (the papillae are on the anterior side). $\times 63$.



PLATE 34.

PLATE 34.

Nereis caenocirrus CHAMBERLIN.

Figures 1-6.

- 1.— Anterior end, dorsal view, epitokous male. $\times 45$.
- 2.— Thirtieth parapodium of heteronereid division of same, caudal view. $\times 63$.
- 3.— Eleventh parapodium of heteronereid division of same, caudal view. $\times 63$.
- 4.— Notopodial seta. $\times 1075$.
- 5.— Notopodial natatory seta from middle region. $\times 278$.
- 6.— Falcate seta of second type from fourth parapodium. $\times 1075$.



PLATE 35.

PLATE 35.

Nereis caenocirrus CHAMBERLIN.

Figures 1, 2.

- 1.—Fourth right parapodium, anterior view. $\times 73$.
- 2.—Seventh right parapodium, anterior view. $\times 73$.

Pseudonereis atopodon CHAMBERLIN.

Figures 3-5.

- 3.—Parapodium from caudal region. \times cir. 26.
- 4.—Homogomph seta from caudal region. \times cir. 600.
- 5.—Neuropodial heterogomph seta from caudal region. \times cir. 600.

Ceratonereis fakaravae CHAMBERLIN.

Figures 6, 7.

- 6.—Notopodial seta from middle region of body. \times cir. 600.
- 7.—Stouter neuropodial seta (less highly magnified).

Perinereis helleri GRUBE.

Figure 8.

- 8.—Heterogomph seta from anterior region. \times cir. 600.

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PLATE 36.

PLATE 36.

Leptoecia abyssorum CHAMBERLIN.

Figures 1-6.

- 1.— Anterior end, dorsal view. × 27.
- 2.— Anterior end, ventral view. × 27.
- 3.— Maxillae, dorsal view. × 45.
- 4.— Mandibles, ventral view. × 45.
- 5.— Seta from posterior region of body, frontal view. × 429.
- 6.— The same, side view. × 429.



PLATE 37.

PLATE 37.

Leptoecia abyssorum CHAMBERLIN.

Figures 1-8.

- 1.—First parapodium, ectal view. $\times 45$.
- 2.—Second parapodium, ectal view. $\times 45$.
- 3.—Third parapodium, ectal view. $\times 45$.
- 4.—Ninth parapodium. $\times 45$.
- 5.—Pectinate seta from posterior region. $\times 1075$.
- 6.—Distal portion of aciculum from middle region. $\times 429$.
- 7.—Crochet from posterior region of body. $\times 429$.
- 8.—Hooded crochet of parapodium I. $\times 429$.

Hyalinoecia leucacra CHAMBERLIN.

Figures 9, 10.

- 9.—Pectinate seta of sixtieth somite. $\times 1075$.
- 10.—Tip of limbate seta of sixty sixth somite. $\times 278$.



PLATE 38.

PLATE 38.

Hyalinoecia leucacra CHAMBERLIN.

Figures 1-3.

- 1.— End of crochet from sixty sixth somite of paratype. $\times 278$.
- 2.— Hooded crochet of first parapodium. $\times 278$.
- 3.— Mandible of paratype. $\times 45$.

Hyalinoecia tecton CHAMBERLIN.

Figures 4-9.

- 4.— Mandibles, dorsal view. $\times 27$.
- 5.— Maxillae of left side. $\times 27$.
- 6.— Crochet from posterior region, distal portion. $\times 278$.
- 7.— Pectinate seta from anterior parapodium. $\times 1075$.
- 8.— Blade of limbate seta from ventral fascicle of a posterior parapodium. $\times 278$.
- 9.— Blade of limbate seta from dorsal group of same parapodium. $\times 278$.

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PLATE 39.

PLATE 39.

Hyalinoecia tecton CHAMBERLIN.

Figures 1, 2.

- 1.— Tips of setae from first parapodium. $\times 63$.
- 2.— Tip of seta from same, more slender form. $\times 63$.

Paronuphis solenotecton CHAMBERLIN.

Figures 3-8.

- 3.— Second left parapodium, caudal view. $\times 63$.
- 4.— First right parapodium, caudal view. $\times 63$.
- 5.— Left mandible, ventral view. $\times 63$.
- 6.— Maxillae I, right blade omitted. $\times 278$.
- 7.— Limbate seta from posterior region of body. $\times 429$.
- 8.— Compound seta of first parapodium. $\times 429$.



PLATE 40.

PLATE 40.

Paronuphis solenotecton CHAMBERLIN.

Figures 1, 2.

- 1.—Pectinate seta from second parapodium. $\times 1075$.
- 2.—Crochet from posterior region. $\times 429$.

Onuphis proalopus CHAMBERLIN.

Figures 3-8.

- 3.—Prostomium and peristomium and appendages, dorsal view. $\times 27$.
- 4.—Maxillae (left blade of I omitted). $\times 45$.
- 5.—Labium. $\times 27$.
- 6.—Tip of aciculum. $\times 429$.
- 7.—Coarse ventral seta of sixth parapodium. $\times 429$.
- 8.—Crochet, middle region of body. $\times 429$.

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PLATE 41.

PLATE 41.

Onuphis proalopus CHAMBERLIN.

Figures 1-10.

- 1.—Compound crochet, fourth parapodium. $\times 429$.
- 2.—Pectinate seta. $\times 1075$.
- 3.—First parapodium, ectal view. $\times 27$.
- 4.—Fourth parapodium, ectoventral view. $\times 27$.
- 5.—Seventh right parapodium, subectal view. $\times 27$.
- 6.—Sixth parapodium, ectoventral view. $\times 27$.
- 7.—First right branchia, with cirrus. $\times 45$.
- 8.—Sixth left branchia, with cirrus. $\times 45$.
- 9.—Ninth right branchia with cirrus. $\times 45$.
- 10.—Twentieth left branchia, with cirrus. $\times 45$.



PLATE 42.

PLATE 42.

Onuphis crassisetosa CHAMBERLIN.

Figures 1-6.

- 1.—Anterior end, dorsal view. $\times 27$.
- 2.—Mandibles. $\times 45$.
- 3.—Maxillae. $\times 45$.
- 4.—Composite crochet of second parapodium. $\times 429$.
- 5.—Limbate seta from middle region of body. $\times 429$.
- 6.—Distal end of aciculum from middle region of body. $\times 429$.



PLATE 43.

PLATE 43.

Onuphis crassisetosa CHAMBERLIN.

Figures 1-7.

- 1.— Pectinate seta from middle region of body. $\times 1075$.
- 2.— Crochet from middle region of body. $\times 429$.
- 3.— First parapodium of type. $\times 45$.
- 4.— Second parapodium, ectal view (paratype). $\times 45$.
- 5.— Third parapodium of type. $\times 45$.
- 6.— Fourth parapodium of type. $\times 45$.
- 7.— Fourth branchia, subectal view. $\times 63$.

Onuphis nannognathus CHAMBERLIN.

Figures 8-11.

- 8.— Maxillae of right side. $\times 27$.
- 9.— Crochet from middle region of body. $\times 429$.
- 10.— Tip of aciculum, middle region of body. \times cir. 175.
- 11.— Pectinate seta, middle region of body. $\times 1075$.



PLATE 44.

PLATE 44.

Onuphis nannognathus CHAMBERLIN.

Figures 1-8.

- 1.— Composite crochet of sixth parapodium. × 429.
- 2.— Distal end of simple, coarser ventral seta from seventh parapodium. × 429.
- 3.— Distal portion of simple dorsal seta of seventh parapodium. × 429.
- 4.— Twentieth branchia, with notocirrus. × 27.
- 5.— Branchia, with cirrus, from near the seventieth somite. × 27.
- 6.— Anterior end, ventral view. × 27.
- 7.— First right parapodium, ectal view. × 27.
- 8.— Fifth right parapodium, ectal view. × 27.



PLATE 45.

PLATE 45.

Onuphis lepta CHAMBERLIN.

Figures 1-7.

- 1.— Anterior end, ventral view (paratype). × 27.
- 2.— Maxillae. × 45.
- 3.— Tip of crochet from middle region of body. × 429.
- 4.— Crochet from second parapodium. × 1075.
- 5.— Pectinate seta from middle region of body. × 1075.
- 6.— Distal end of seta from seventh parapodium. × 429.
- 7.— Distal end of aciculum from middle region of body. × 1075.



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PLATE 46.

PLATE 46.

Onuphis nannognathus CHAMBERLIN.

Figures 1, 2.

- 1.— Seventh parapodium, ectal view. $\times 27$.
- 2.— Ninth parapodium, ectal view. $\times 27$.

Onuphis lepta CHAMBERLIN.

Figures 3-12.

- 3.— First left parapodium, ectal view. $\times 45$.
- 4.— Third right parapodium, ectal view. $\times 45$.
- 5.— Fourth right parapodium, ectal view. $\times 45$.
- 6.— Fifth right parapodium, ectal view. $\times 45$.
- 7.— Sixth right parapodium, ectal view. $\times 45$.
- 8.— Seventh right parapodium, ectal view. $\times 45$.
- 9.— First left branchia, ectodorsal view. $\times 63$.
- 10.— Third left branchia, ectodorsal view. $\times 63$.
- 11.— Seventh right branchia, subdorsal view. $\times 63$.
- 12.— Twenty third right branchia, dorsal view. $\times 63$.

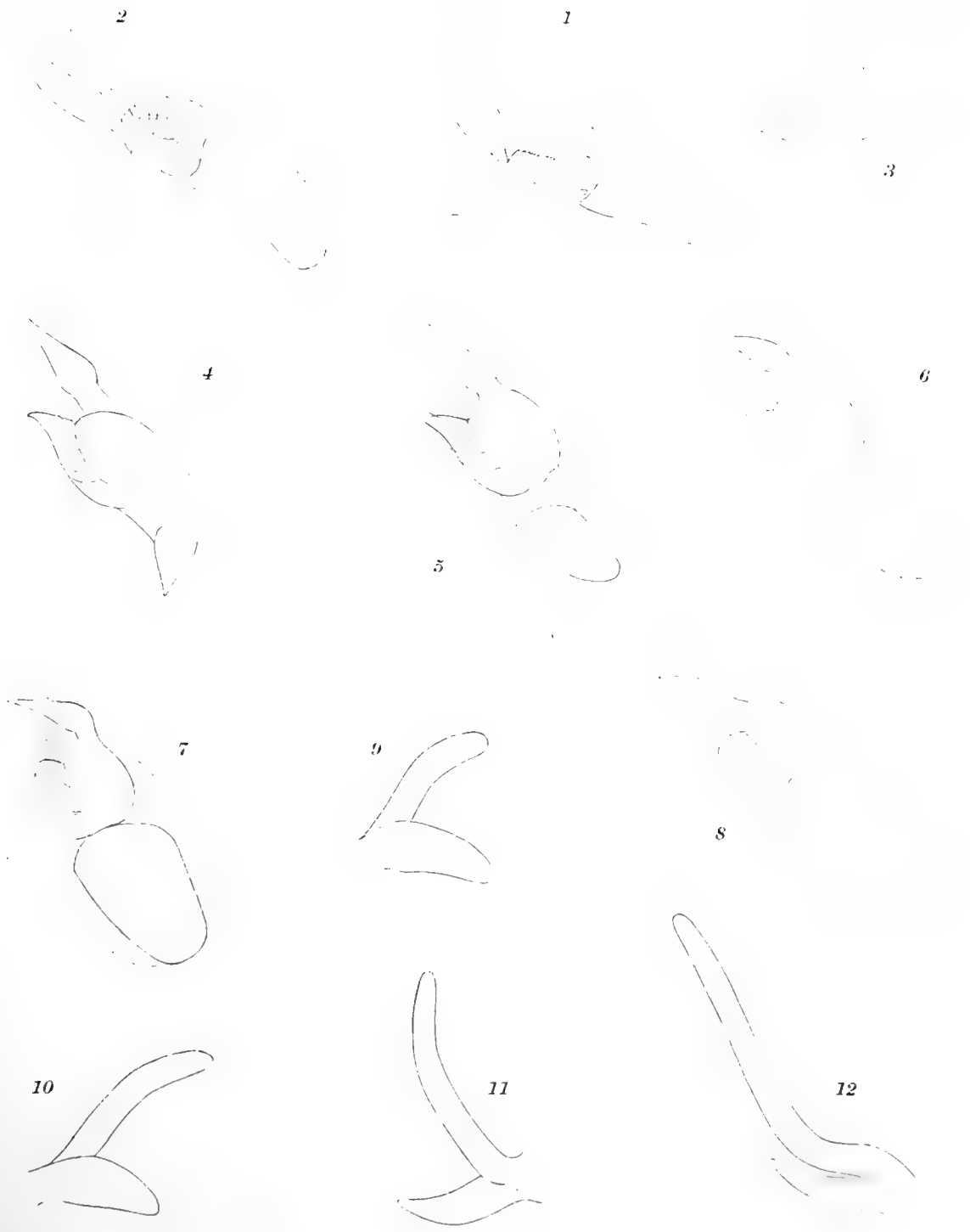


PLATE 47.

PLATE 47.

Onuphis socia CHAMBERLIN.

Figures 1-11.

- 1.—Mandibles. $\times 27$.
- 2.—Right maxillae (carrier-plate of I complete). $\times 27$.
- 3.—Tip of compound crochet of first parapodium. $\times 1075$.
- 4.—Dorsal seta. $\times 429$.
- 5.—Ordinary crochet, distal end. $\times 429$.
- 6.—Distal portion of aciculum. $\times 429$.
- 7.—Second left parapodium, ectal view. $\times 27$.
- 8.—Fourth parapodium, ectal view. $\times 27$.
- 9.—First branchia with cirrus. $\times 45$.
- 10.—Second right branchia with cirrus. $\times 45$.
- 11.—Third branchia with cirrus, dorsal view. $\times 45$.



PLATE 48.

PLATE 48.

Onuphis socia CHAMBERLIN.

Figures 1-4.

- 1.— Fifth branchia, dorsal view. $\times 45$.
- 2.— Eleventh right branchia. $\times 45$.
- 3.— Thirteenth left branchia, dorsal view. $\times 45$.
- 4.— Thirty fourth right branchia, sublateral view. $\times 45$.

Onuphis pachymema CHAMBERLIN.

Figures 5-11.

- 5.— First left parapodium, ectal view. $\times 27$.
- 6.— Second left parapodium, ectal view. $\times 27$.
- 7.— Fourth parapodium, ectal view. $\times 27$.
- 8.— First right branchia, with notocirrus. $\times 45$.
- 9.— Third left branchia, with notocirrus. $\times 45$.
- 10.— Fifth left branchia, with notocirrus. $\times 45$.
- 11.— Last distinct left branchia of type. $\times 45$.



PLATE 49.

PLATE 49.

Onuphis pachytmema CHAMBERLIN.

Figures 1-8.

- 1.— Seventh left branchia with cirrus, subdorsal view. $\times 45$.
- 2.— Eighth left branchia with cirrus, subdorsal view. $\times 45$.
- 3.— Twenty second right branchia with cirrus, ectodorsal view. $\times 45$.
- 4.— Twenty fifth right branchia, subdorsal view. $\times 45$.
- 5.— Anterior end, ventral view. $\times 19$.
- 6.— First and second maxillae. $\times 27$.
- 7.— Mandibles. $\times 27$.
- 8.— Distal portion of crochet from middle region of body. $\times 429$.

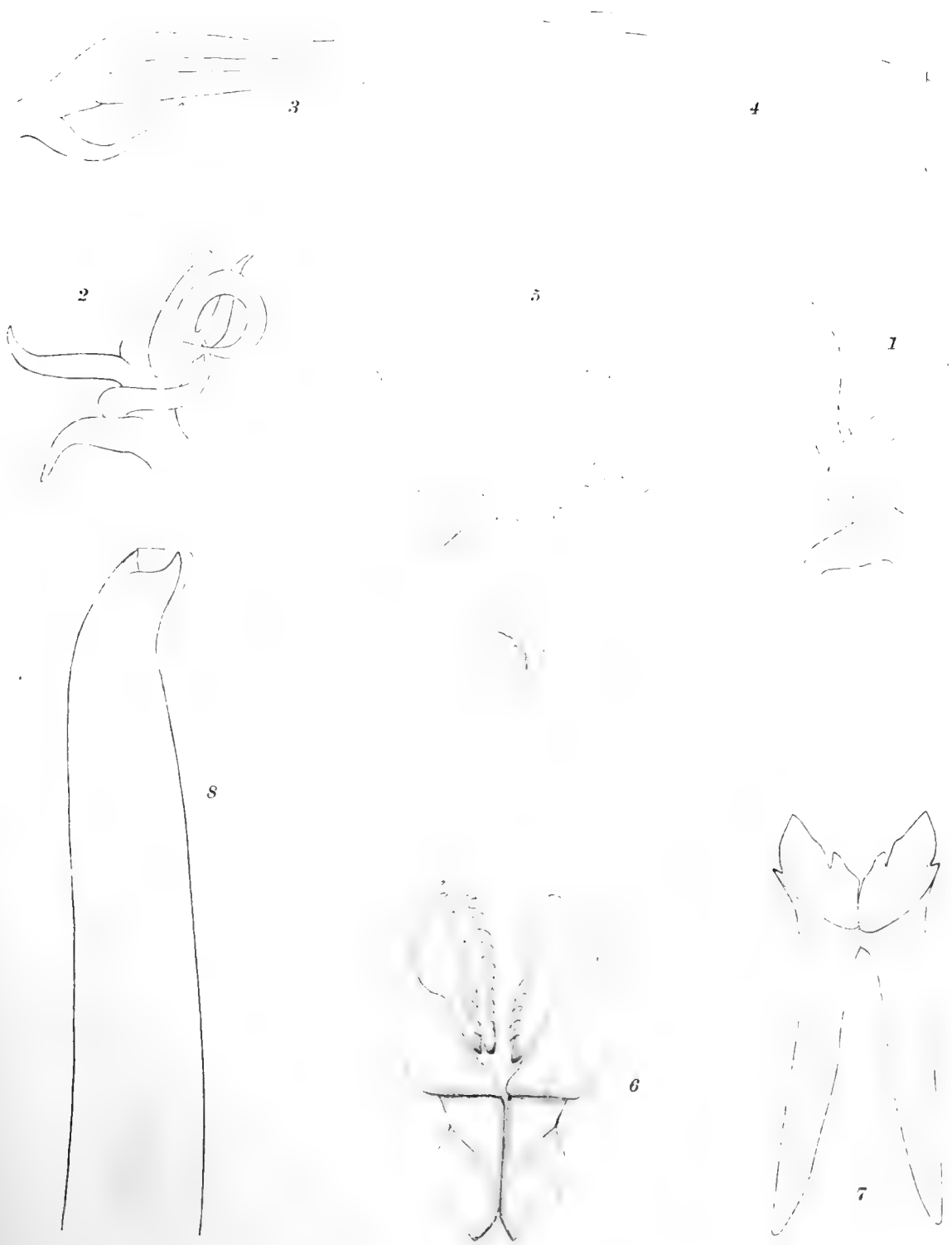


PLATE 50.

PLATE 50.

Onuphis pachytmemma CHAMBERLIN.

Figures 1-6.

- 1.— Distal end of composite crochet from the second parapodium. $\times 1075$.
- 2.— Tip of coarse ventral seta corresponding to composite crochets of first three parapodia, from fourth parapodium. $\times 1075$.
- 3.— Distal portion of ventral seta from middle region of body. $\times 429$.
- 4.— Dorsal capillary seta from second parapodium. $\times 429$.
- 5.— Pectinate seta from middle region of body. $\times 1075$.
- 6.— Distal portion of aciculum of sixty sixth somite of paratype. $\times 278$.

Onuphis litabbranchia CHAMBERLIN.

Figure 7.

- 7.— Maxillae of left side, dorsal view. $\times 45$.



PLATE 51.

PLATE 51.

Onuphis litabbranchia CHAMBERLIN.

Figures 1-10.

- 1.— Anterior end, ventral view. $\times 27$.
- 2.— Distal end of aciculum from middle region. $\times 437$.
- 3.— Distal end of limbate seta from middle region. $\times 437$.
- 4.— Distal end of pectinate seta from middle region of body. $\times 1075$.
- 5.— Distal end of crochet from middle region of body. $\times 437$.
- 6.— Distal end of special crochet from second parapodium. $\times 1075$.
- 7.— First parapodium, caudoectal view. $\times 63$.
- 8.— First branchia with notocirrus, subectal view. $\times 63$.
- 9.— Sixth branchia with notocirrus. $\times 63$.
- 10.— Thirteenth right branchia with notocirrus and dorsal setae. $\times 63$.

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PLATE 52.

PLATE 52.

Onuphis litabbranchia CHAMBERLIN.

Figure 1.

- 1.— Branchia with cirrus from anterior middle region. $\times 63$.

Onuphis cobra CHAMBERLIN.

Figures 2-8.

- 2.— Mandibles, with distal portion of masticatory plates broken off. $\times 27$.
3.— Maxillae. $\times 27$.
4.— Distal end of aciculum from posterior region.
5.— Limbate seta of posterior region, not quite full side view. $\times 429$.
6.— Pectinate seta with corners not inflexed. $\times 429$.
7.— Ordinary crochet from posterior region. $\times 429$.
8.— Special crochet from first parapodium, guard broken off. $\times 429$.



PLATE 53.

PLATE 53.

Leodice makemoana CHAMBERLIN.

Figures 1-11.

- 1.— Anterior dorsal region, lateral view. $\times 51$.
- 2.— Mandibles, ventral view. $\times 72$.
- 3.— First maxillae, with left blade incomplete. $\times 72$.
- 4.— Pectinate seta from caudal region. $\times 1232$.
- 5.— Distal portion of composite seta from anterior region. $\times 1232$.
- 6.— Distal end of crochet from posterior region. $\times 493$.
- 7.— First branchia with notocirrus, ectodorsal view. $\times 72$.
- 8.— Tenth branchia with notocirrus, ectodorsal view. $\times 72$.
- 9.— Eighth from last branchia with notocirrus, subanterior view. $\times 72$.
- 10.— Antepenult branchia and notocirrus, anterior view. $\times 72$.
- 11.— Last branchia and notocirrus. $\times 72$.



PLATE 54.

PLATE 54.

Leodice segregata CHAMBERLIN.

Figures 1-5.

- 1.—Maxillae I and II of left side. $\times 25$.
- 2.—Pectinate seta. $\times 1232$.
- 3.—Distal end of crochet of posterior region. $\times 319$.
- 4.—Branchia of eleventh somite with notocirrus. $\times 25$.
- 5.—Branchia and notocirrus of second to last branchiferous somite (paratype from Sta. 3417). $\times 25$.

Leodice lita CHAMBERLIN.

Figures 6-10.

- 6.—First branchia, with notocirrus of eighteenth somite. $\times 72$.
- 7.—Third branchia, with notocirrus. $\times 72$.
- 8.—Fifth branchia, with notocirrus. $\times 72$.
- 9.—Tenth branchia, with notocirrus. $\times 72$.
- 10.—Twelfth branchia, with notocirrus. $\times 72$.



PLATE 55.

PLATE 55.

Leodice lita CHAMBERLIN.

Figures 1-7.

- 1.—Thirty first branchia and notocirrus, subdorsal view. $\times 72$.
- 2.—Mandibles, ventral view. $\times 31$.
- 3.—Maxillae I. $\times 31$.
- 4.—Distal portion of aciculum from middle region showing the common form of apex. $\times 319$.
- 5.—Crochet. $\times 298$.
- 6.—Shaft and appendage of composite seta. $\times 319$.
- 7.—Pectinate seta. $\times 1232$.

Leodice oliga papeetensis CHAMBERLIN.

Figures 8-10.

- 8.—First branchia with notocirrus. $\times 72$.
- 9.—Sixth branchia with notocirrus, caudal view. $\times 72$.
- 10.—Nineteenth branchia with notocirrus, anterodorsal view. $\times 72$.

Leodice oliga CHAMBERLIN.

Figure 11.

- 11.—Apical portion of crochet. $\times 493$.

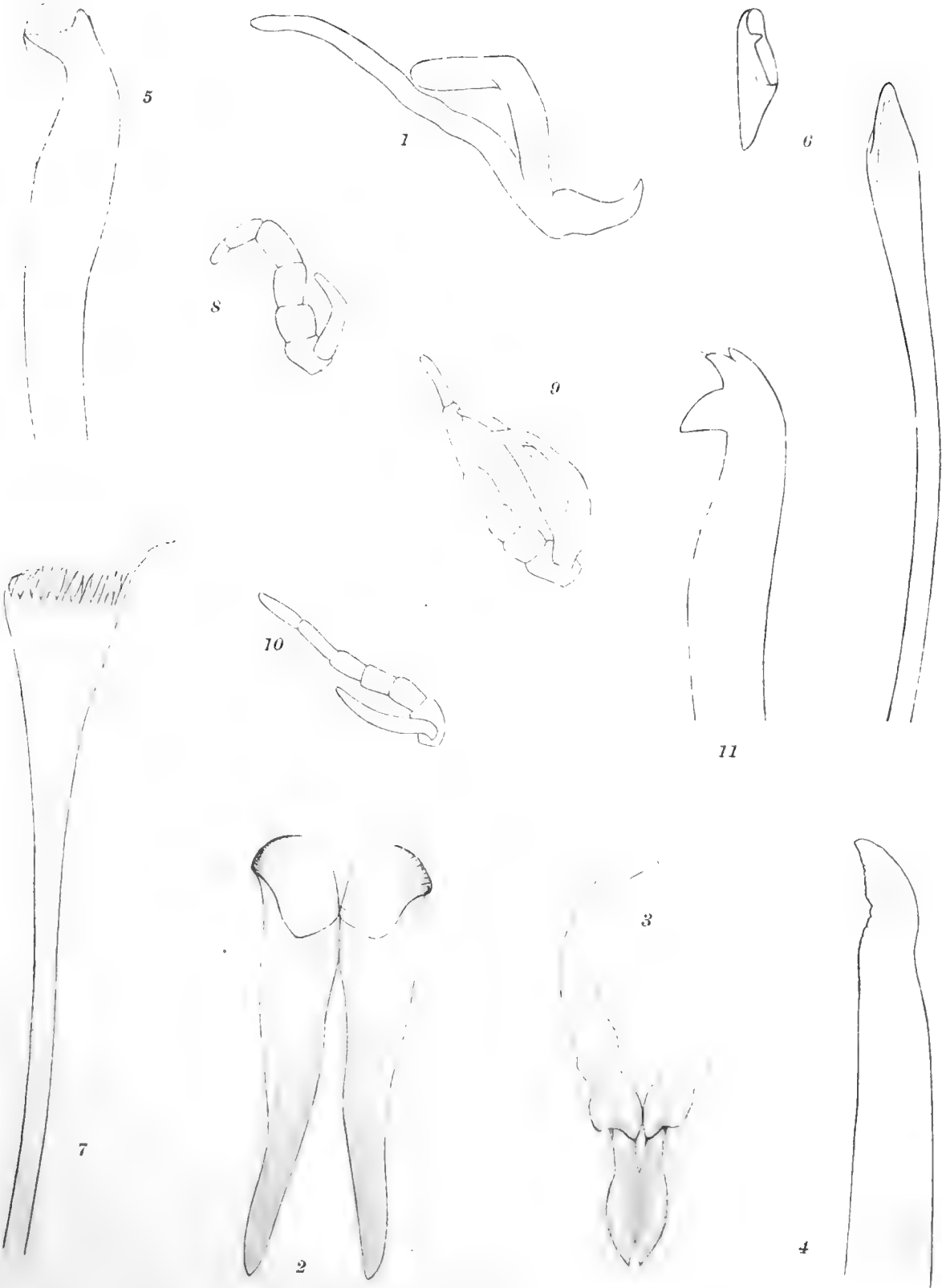


PLATE 56.

PLATE 56.

Leodice oliga papeetensis CHAMBERLIN.

Figure 1.

- 1.— Twenty sixth branchia. $\times 74$.

Leodice oliga CHAMBERLIN.

Figures 2-9.

- 2.— Mandibles, ventral view. $\times 74$.
3.— Pectinate seta. $\times 1261$.
4.— Composite seta. $\times 1261$.
5.— First branchia, with notocirrus. $\times 74$.
6.— Second branchia in caudal group, with notocirrus. $\times 74$.
7.— Fourth branchia, with notocirrus, dorsocaudal view. $\times 74$.
8.— Sixth branchia, with notocirrus, subcaudal view. $\times 74$.
9.— Probably eighth branchia, subcaudal view. $\times 74$.

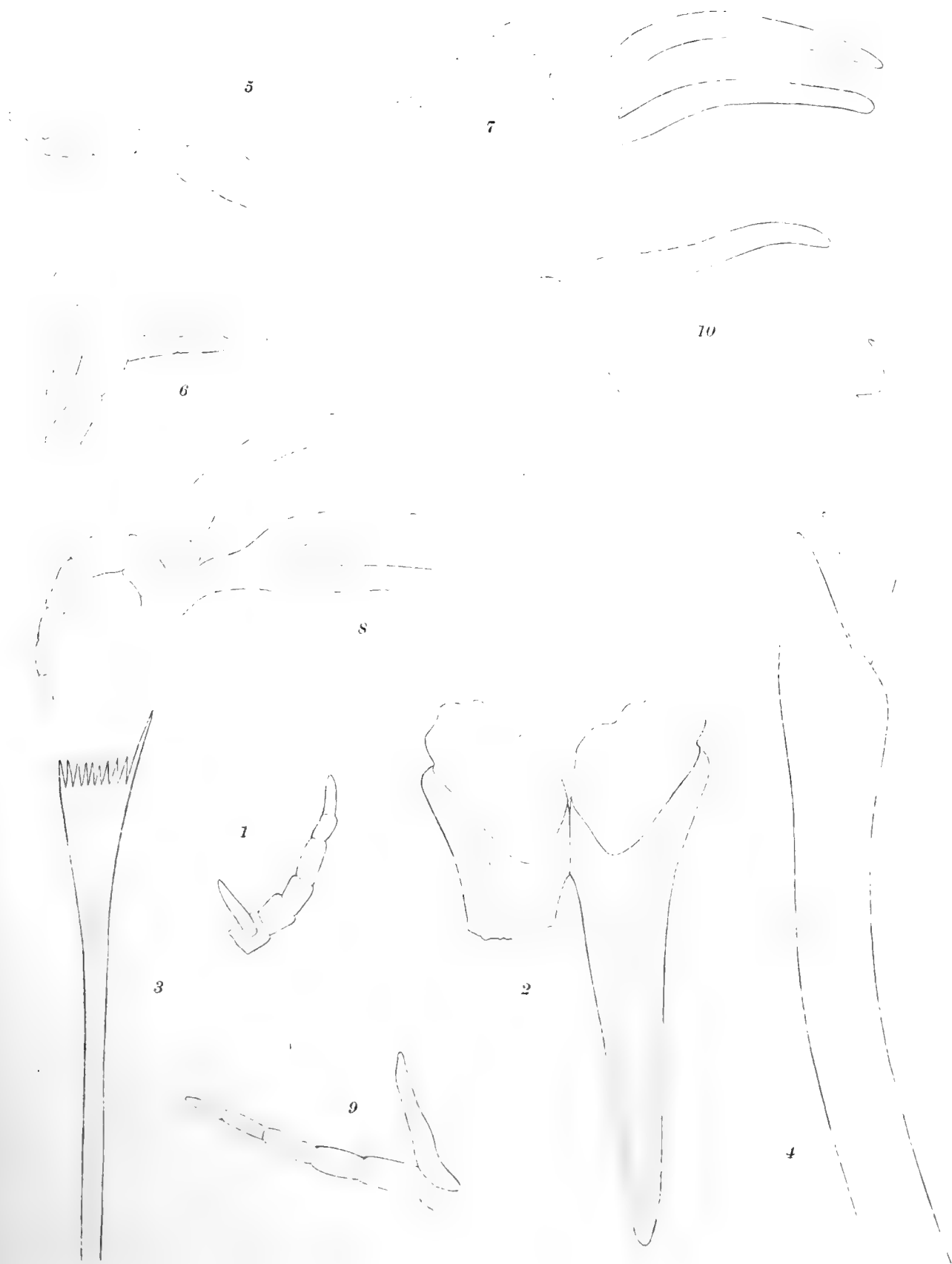


PLATE 57.

PLATE 57.

Leodice contingens CHAMBERLIN.

Figures 1-5.

- 1.— Maxillae I and II, left side, dorsal view. $\times 17$.
- 2.— Right branchia with notocirrus of twenty fourth somite. $\times 24$.
- 3.— Distal portion of dorsal seta. $\times 326$.
- 4.— Distal end of crochet from posterior region. $\times 326$.
- 5.— Composite seta from caudal region. $\times 326$.

Leodice nesiotes CHAMBERLIN.

Figures 6, 7.

- 6.— Right mandible, ventral view. $\times 23$.
- 7.— Composite seta, thirtieth somite. $\times 298$.

Leodice paurneurata CHAMBERLIN.

Figures 8, 9.

- 8.— Pectinate seta. $\times 1261$.
- 9.— Composite seta. $\times 326$.



PLATE 58.

PLATE 53.

Leodice pauroneurata CHAMBERLIN.

Figures 1-9.

- 1.— Crochet from posterior region. $\times 319$.
- 2.— Mandibles. $\times 26$.
- 3.— Right maxilla I. $\times 26$.
- 4.— Maxilla III, dorsal view. $\times 31$.
- 5.— Paired tentacles of right side, lateral view. $\times 25$.
- 6.— Tentacular cirrus. $\times 46$.
- 7.— First left branchia, with notocirrus, caudal view. $\times 57$.
- 8.— Fourth left branchia, with notocirrus, caudal view. $\times 57$.
- 9.— Eleventh left branchia, with notocirrus, caudal view. $\times 57$.



PLATE 59.

PLATE 59.

Leodice pauroneurata CHAMBERLIN.

Figures 1-3.

- 1.—Thirteenth branchia, with notocirrus, caudal view. $\times 58$.
- 2.—Thirty second branchia, with notocirrus, caudal view. $\times 58$.
- 3.—Fifty fourth branchia, with notocirrus, caudal view of sixty third somite. $\times 58$.

Leodice panamena CHAMBERLIN.

Figures 4-8.

- 4.—First right branchia, anterior view. $\times 46$.
- 5.—Second right branchia, subdorsal view. $\times 46$.
- 6.—Sixth right branchia, subdorsal view. $\times 46$.
- 7.—Eleventh right branchia, subdorsal view. $\times 46$.
- 8.—Sixty first right branchia, subdorsal view. $\times 46$.



PLATE 60.

PLATE 60.

Leodice panamena CHAMBERLIN.

Figures 1-5.

- 1.— Distal portion of crochet from fifty sixth somite. $\times 504$.
- 2.— Composite seta from fifty sixth somite. $\times 1261$.
- 3.— Pectinate seta from fifty sixth somite. $\times 1261$.
- 4.— Mandibles, ventral view. $\times 31$.
- 5.— Maxillae I, dorsal view. $\times 31$.

Lumbrinereis bifilaris EHLERS.

Figures 6-9.

- 6.— Mandibles, ventral view.
- 7.— Maxillae II, III, and IV.
- 8.— Distal end of limbate seta of fifteenth somite.
- 9.— The same, of another seta of same somite, different view.



PLATE 61.

PLATE 61.

Lumbrinereis bifilaris EILERS.

Figure 1.

- 1.— Crochet, from caudal region.

Cenothrix mutans CHAMBERLIN.

Figures 2-9.

- 2.— Maxillae, dorsal view. $\times 76$.
3.— Mandibles. $\times 76$.
4.— Anterior region of body, ventral view. $\times 32$.
5.— Dorsal seta and aciculum of middle region. $\times 495$.
6.— Crochet, viewed from edge. $\times 495$.
7.— Another crochet, side view. $\times 495$.
8.— Limbate seta of first type from middle region. $\times 495$.
9.— Parapodium from middle region, anterior view. $\times 117$.



PLATE 62.

PLATE 62.

Cenothrix mutans CHAMBERLIN.

Figure 1.

1.—Limbate seta of second type. $\times 412$.

Oenone telura CHAMBERLIN.

Figures 2-5.

2.—Maxillae, dorsal view. $\times 64$.

3.—Anterior end, ventral view (proboscis omitted). $\times 27$.

4.—Parapodium of middle region, caudal view. $\times 64$.

5.—Crochet. $\times 412$.

Dorvillea crassa CHAMBERLIN.

Figures 6, 7.

6.—Mandibles. $\times 27$.

7.—Simple dorsal seta. $\times 1087$.



PLATE 63

PLATE 63.

Dorvillea crassa CHAMBERLIN.

Figure 1.

- 1.— Composite seta, distal portion. $\times 1075$.

Hemipodus mexicanus CHAMBERLIN.

Figures 2, 3.

- 2.— Twelfth parapodium, caudal view. $\times 63$.
3.— Composite seta, distal portion. $\times 1075$.

Telake epipolasis CHAMBERLIN.

Figures 4-8.

- 4.— Twenty first parapodium. $\times 63$.
5.— Thirty seventh parapodium. $\times 63$.
6.— Distal portion of notopodial seta of twenty first parapodium. $\times 1075$.
7.— Tip of neuropodial seta of thirty seventh parapodium. $\times 1075$.
8.— Portion of same seta at proximal end of free part. $\times 1075$.



PLATE 64.

PLATE 64.

Telake epipolasis CHAMBERLIN.

Figure 1.

- 1.— Distal portion of ventral seta of twenty first parapodium. $\times 811$.

Glycera profunda CHAMBERLIN.

Figures 2-6.

- 2.— Prostomium. $\times 26$.
3.— Fourth parapodium, caudal view. $\times 50$.
4.— Twentieth parapodium, caudal view. $\times 50$.
5.— Fiftieth parapodium, cephalic view. $\times 50$.
6.— One hundredth parapodium, cephalic view. $\times 50$.

Branchethus latum CHAMBERLIN.

Figures 7-11.

- 7.— Sixth branchia. $\times 49$.
8.— Tenth branchia. $\times 49$.
9.— Basal portion of thirtieth branchia with all filaments broken off near base, subdorsal view. $\times 49$.
10.— Branchia from caudal region. $\times 49$.
11.— Branchia from caudal region, a broader form. $\times 49$.



PLATE 65.

PLATE 65.

Branchethus latum CHAMBERLIN.

Figures 1, 2.

- 1.—Neuropodial seta of anterior parapodium. $\times 278$.
- 2.—Portion of notopodial seta of anterior parapodium. $\times 278$.

Nainereis retusiceps CHAMBERLIN.

Figures 3-5.

- 3.—Tenth parapodium, anterior view. $\times 63$.
- 4.—Ventral neuropodial seta, tenth parapodium. $\times 278$.
- 5.—Ordinary neuropodial seta, tenth parapodium. $\times 278$.

Plotobia simplex CHAMBERLIN.

Figures 6-11.

- 6.—Style of first right notocirrus. $\times 63$.
- 7.—Style of second right notocirrus. $\times 63$.
- 8.—Style of third right notocirrus. $\times 63$.
- 9.—Style of fifteenth right notocirrus. $\times 63$.
- 10.—Style of last right notocirrus. $\times 63$.
- 11.—Style of neurocirrus of about fifteenth setigerous somite. $\times 63$.

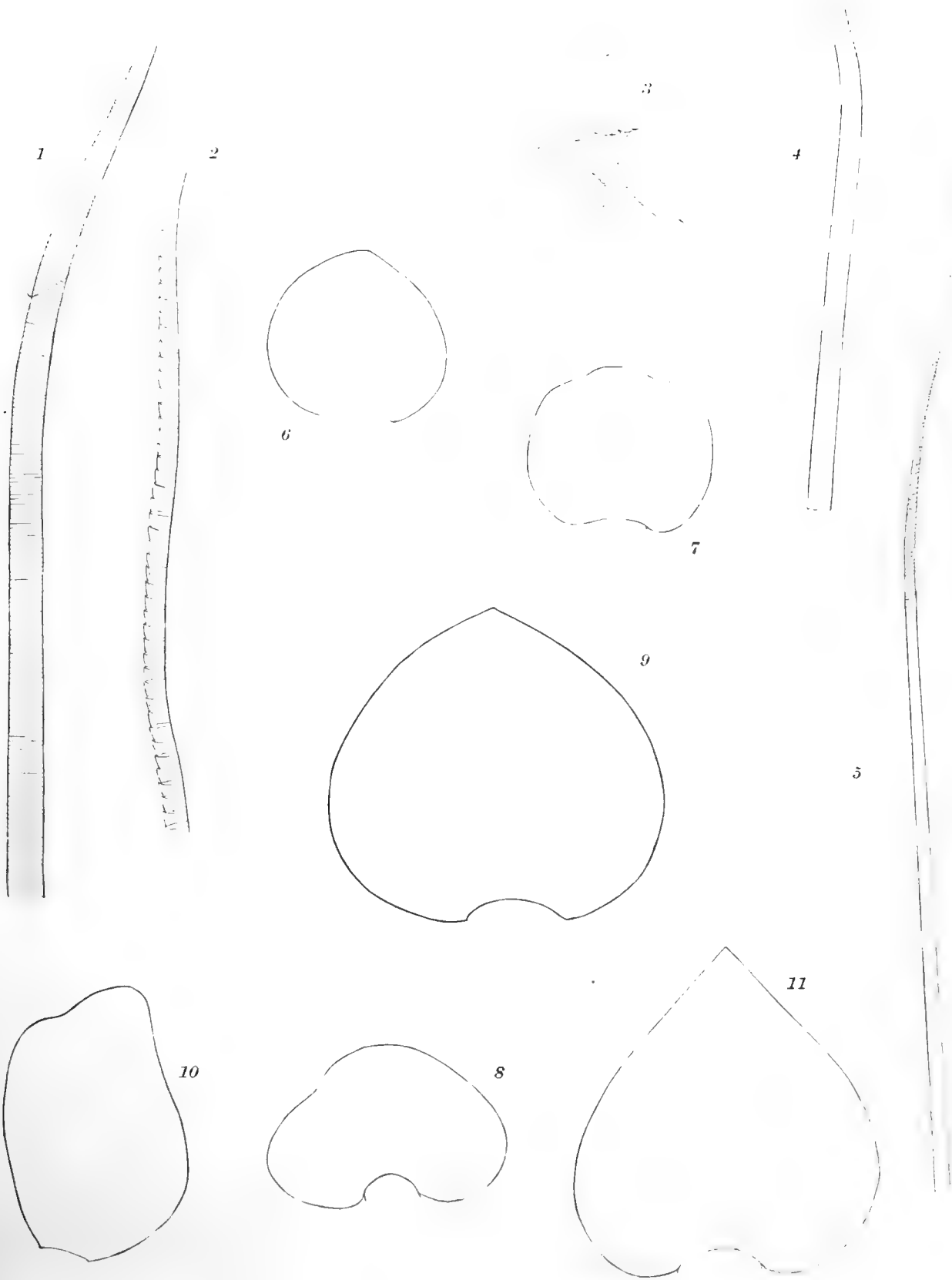


PLATE 66.

PLATE 66.

Plotobia simplex CHAMBERLIN.

Figure 1.

- 1.— Anterior end seen from above and a little to the right (styles of left notocirri, excepting the first one, missing).

Plotobia coniceps CHAMBERLIN.

Figures 2-4.

- 2.— Anterior end, dorsal view (paratype, Sta. 4661). × 32.
3.— Anterior end, lateral view, styles of cirri missing (type). × 32.
4.— Caudal end, dorsal view (paratype). × 32.



PLATE 67.

PLATE 67.

Travisia profunda CHAMBERLIN.

Figures 1-4.

- 1.— Lateral view.
- 2.— Anterior end, ventral view. $\times 32$.
- 3.— Portion of third somite showing first branchia, setae, sensory pit. $\times 76$.
- 4.— Branchia and adjoining structures of eighth somite. $\times 76$.

Kesun fusus CHAMBERLIN.

Figure 5.

- 5.— Portion of fourth somite showing setae, sensory pit, etc. $\times 76$.



• PLATE 68.

PLATE 68.

Kesun fusus CHAMBERLIN.

Figures 1, 2.

- 1.—Anterior end, ventral view. $\times 38$.
- 2.—Caudal end, lateral view. $\times 38$.

Brada verrucosa CHAMBERLIN.

Figures 3-6.

- 3.—Palpus, ventral view. $\times 35$.
- 4.—Seta of neuropodium of twentieth somite. $\times 76$.
- 5.—Seta of notopodium of eleventh somite. $\times 76$.
- 6.—Notopodial seta of eleventh somite; *a.* base, *b.* toward tip. $\times 337$.

Brada irenaia CHAMBERLIN.

Figures 7-9.

- 7.—Notopodial seta of thirteenth somite. $\times 76$.
- 8.—Portion toward distal end of same seta. $\times 337$.
- 9.—Portion toward base of same seta. $\times 337$.

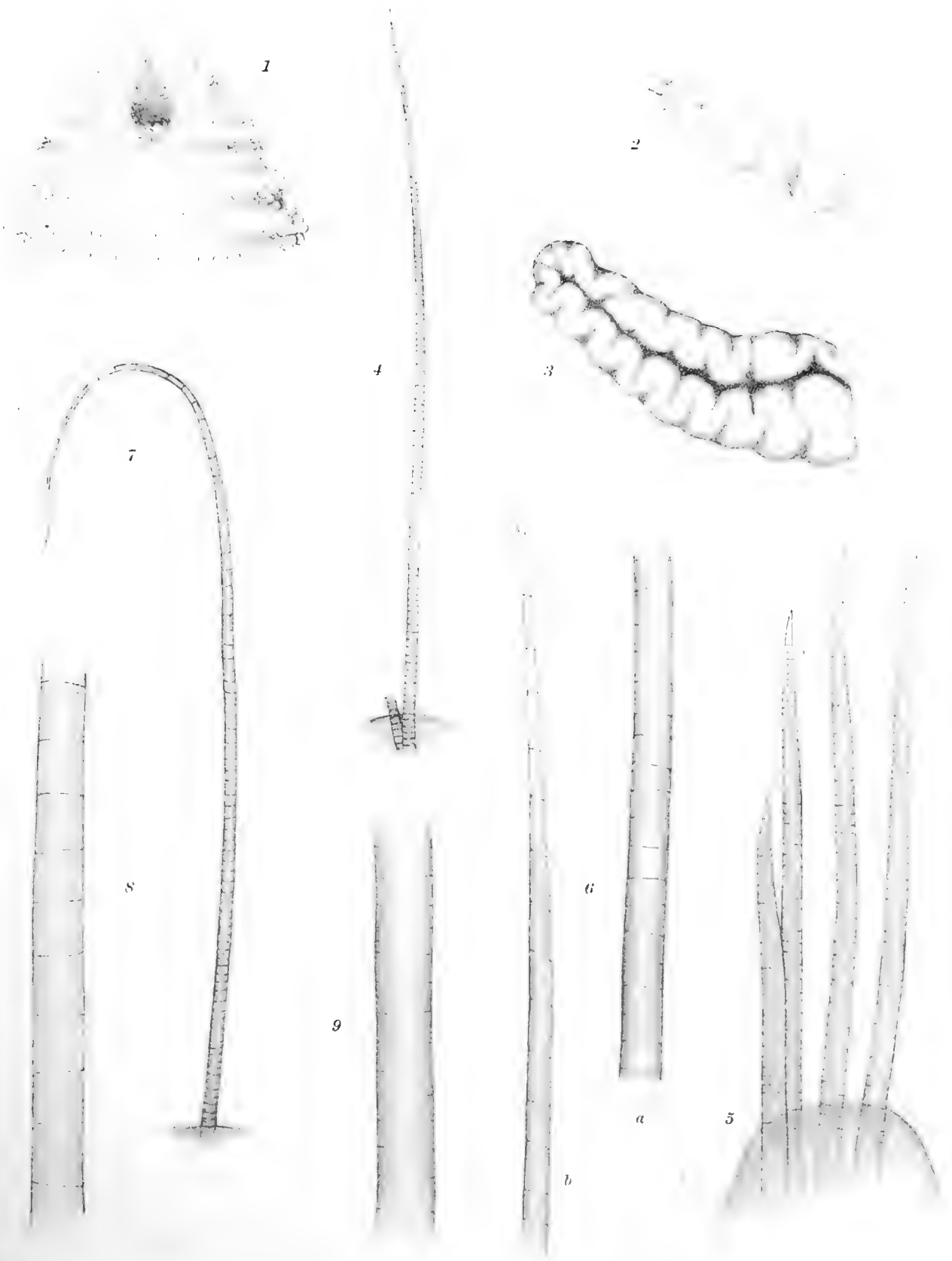


PLATE 69.

PLATE 69.

Brada irenaia CHAMBERLIN.

Figures 1-3.

- 1.—Neuropodial seta from thirteenth somite. $\times 76$.
- 2.—Portion from basal region of neuropodial seta of the more common form, sixteenth somite. $\times 337$.
- 3.—Similar portion from neuropodial seta with exceptionally short annuli. $\times 337$.

Ilyphagus bythincola CHAMBERLIN.

Figures 4-9.

- 4.—Notopodial seta of eleventh somite. $\times 76$.
- 5.—Portion of same toward tip. $\times 337$.
- 6.—Portion of same at base. $\times 337$.
- 7.—Neuropodial seta from eleventh somite. $\times 76$.
- 8.—Portion of same at base. $\times 337$.
- 9.—Portion of neuropodial seta near middle from tenth somite. $\times 337$.



PLATE 70.

PLATE 70.

Cirratulus megalus CHAMBERLIN.

Figures 1-4.

- 1.— Anterior end, dorsal view. $\times 7.5$.
- 2.— Anterior end, ventral view. $\times 7.5$.
- 3.— Two ventral spines and one capillary seta. $\times 63$.
- 4.— Portion of capillary seta. $\times 1036$.

Cirrineris nesiotes CHAMBERLIN.

Figures 5, 6.

- 5.— Ventral spine. $\times 278$.
- 6.— Ventral capillary seta. $\times 278$.

Cirratulus sinincolens CHAMBERLIN.

Figures 7-10.

- 7.— Neuropodial acicula from posterior region, proximal ends not shown. $\times 278$.
- 8.— Distal portion of single ventral spine of same parapodium. $\times 278$.
- 9.— Ordinary seta, anterior region. $\times 278$.
- 10.— Finer dorsal neuropodial seta, posterior region. $\times 278$.



PLATE 71.

PLATE 71.

Sonatsa meridionalis CHAMBERLIN.

Figures 1-8.

- 1.— Anterior end, lateral view. \times cir. 8.5.
- 2.— Anterior region, dorsal view. \times cir. 8.5.
- 3.— Region of fifth, sixth, and seventh somites, lateral view.
- 4.— Uncinus of eighth somite. \times 337.
- 5.— Distal end of uncinus, or crochet, of third setigerous somite. \times 1150.
- 6.— Distal end of crochet of eighth setigerous somite. \times 1150.
- 7.— Beginning of serrate portion of capillary setae from middle region. \times cir. 1150.
- 8.— Limbate seta of third setigerous somite. \times cir. 1300.

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PLATE 72.

PLATE 72.

Maldanella fibrillata CHAMBERLIN.

Figures 1-6.

- 1.— Anterior end, lateral view. × cir. 8.5.
- 2.— Anterior end, subdorsal view. × cir. 8.5.
- 3.— Caudal end, lateral view. × 8.5.
- 4.— Uncinus of third setigerous somite. × 337.
- 5.— Distal end of uncinus of normal form, third setigerous somite. × cir. 1150.
- 6.— Distal end of uncinus of occasional form, third setigerous somite. × cir. 1150.



PLATE 73.

PLATE 73.

Maldanella fibrillata CHAMBERLIN.

Figures 1, 2.

- 1.— Distal end of capillary seta of third setigerous somite (fibrillae not shown). $\times 337$.
- 2.— Portion of middle region of same. $\times 337$.

Petaloproctus crenatus CHAMBERLIN.

Figures 3-7.

- 3.— Caudal end, lateral view. $\times 337$.
- 4.— The same, dorsal view. $\times 337$.
- 5.— Distal portion of major capillary seta of eighth somite. $\times 337$.
- 6.— Uncinus of eighth somite. $\times 337$.
- 7.— Distal end of same. \times cir. 1150.

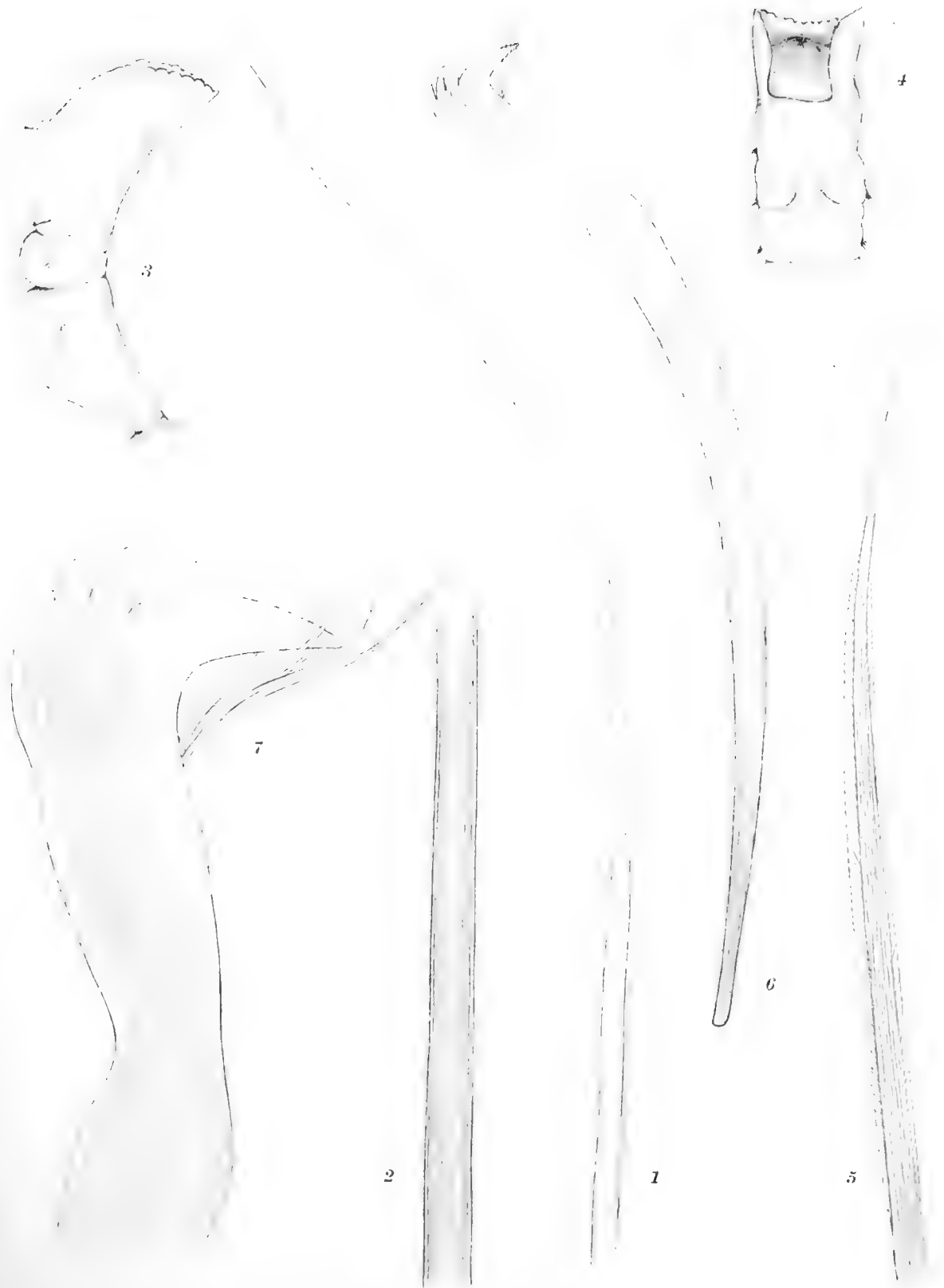


PLATE 74.

PLATE 74.

Idanthyrus regalis CHAMBERLIN.

Figures 1-8.

- 1.— Neuropodial seta of second thoracic somite. $\times 113$.
- 2.— Portion of neuropodial seta toward tip, eighth abdominal somite. $\times 1305$.
- 3.— Uncinus in profile. $\times 1305$.
- 4.— Neuropodial paleae, fourth thoracic somite. $\times 76$.
- 5.— Notopodial paleae of same somite. $\times 76$.
- 6.— Inner opercular paleae. $\times 76$.
- 7.— Typical outer paleae. $\times 76$.
- 8.— Anterior outer paleae. $\times 76$.

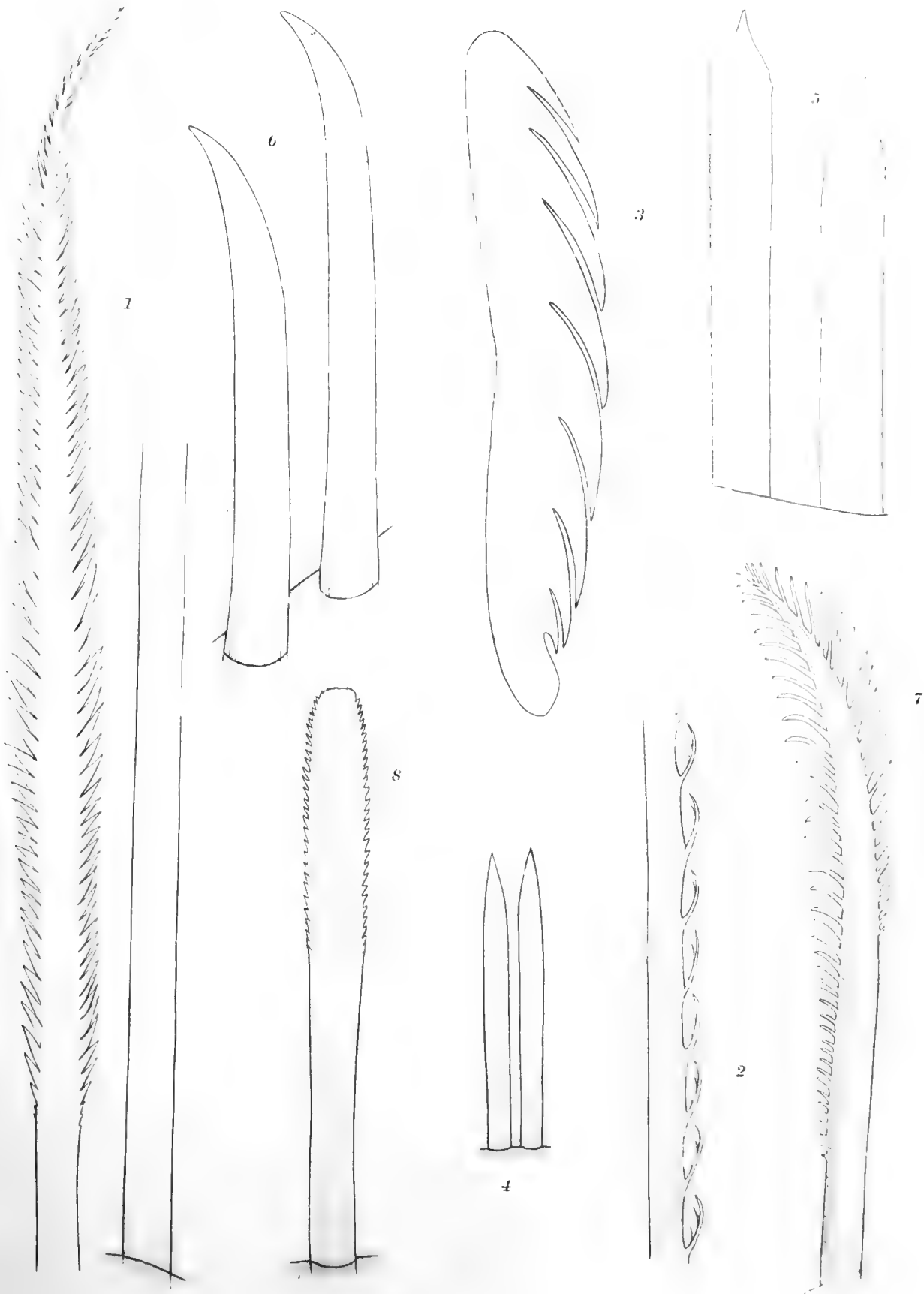


PLATE 75.

PLATE 75.

Tetreres nesiotes CHAMBERLIN.

Figures 1-7.

- 1.—Uncinus. $\times 870$.
- 2.—Seta from thirty fifth abdominal somite, with portion more highly enlarged.
- 3.—Inner opercular paleae from near anterior end of series. $\times 51$.
- 4.—Three outer paleae from near caudal end of series. $\times 51$.
- 5.—Notopodial paleae from last thoracic somite. $\times 75$.
- 6.—Neuropodial paleae from second thoracic somite. $\times 75$.
- 7.—Nuchal hook, with adjacent papilla, in outline. $\times 51$.

Idanthyrus cretus CHAMBERLIN.

Figures 8-15.

- 8.—Notopodial seta, first abdominal somite. $\times 396$.
- 9.—Simple seta from notopodium of second pale-bearing somite. $\times 78$.
- 10.—Uncinus from middle region of body. $\times 870$.
- 11.—Five of the inner opercular paleae. $\times 78$.
- 12.—One of the shorter outer paleae. $\times 78$.
- 13.—Three dorsal thoracic paleae in different aspects from the second pale-bearing somite. $\times 78$.
- 14.—Dorsal thoracic palea from second pale-bearing somite, surface view. $\times 78$.
- 15.—Ventral thoracic palea, first pale-bearing somite. $\times 78$.

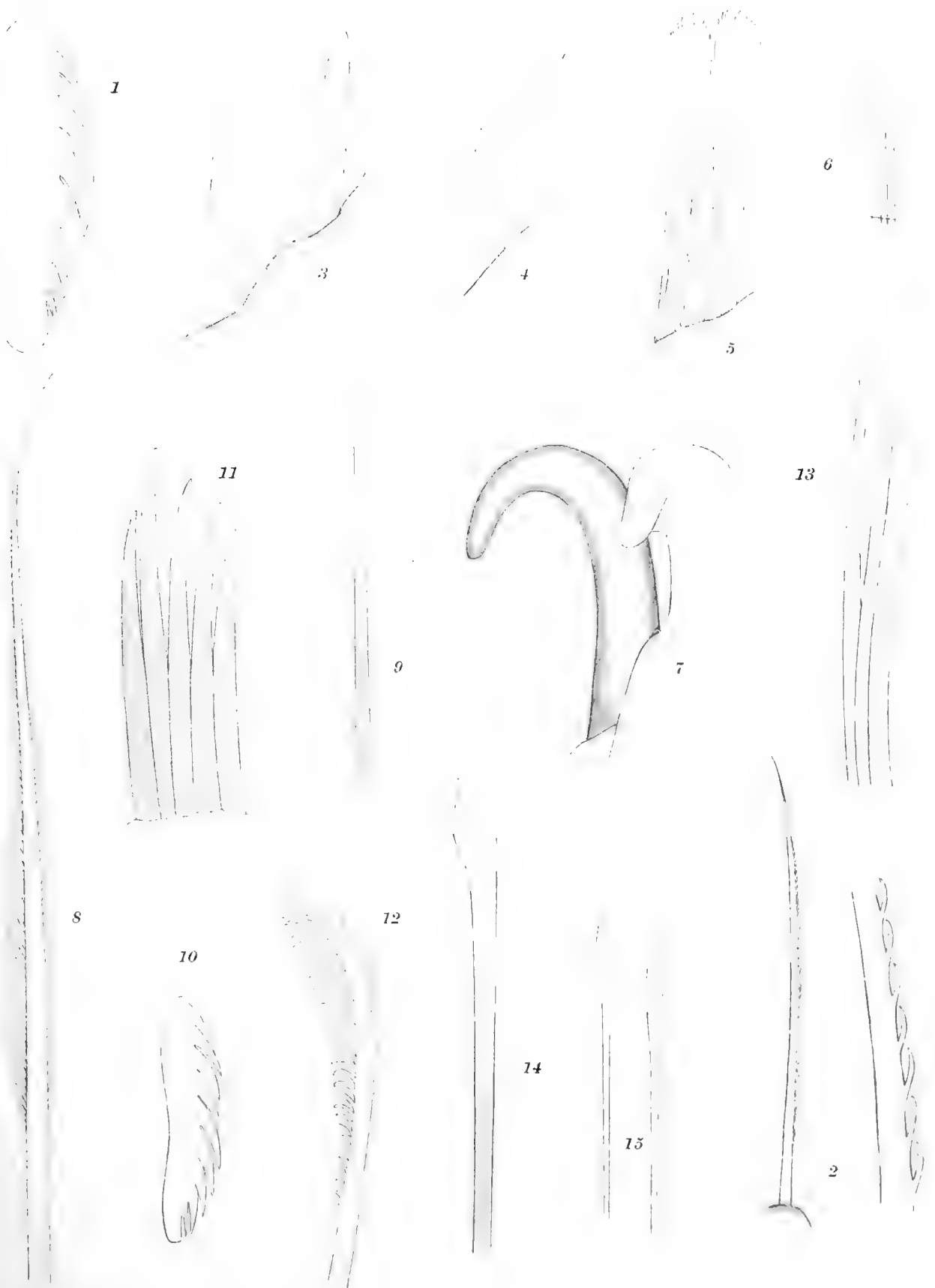


PLATE 76.

PLATE 76.

Amphicteis obscurior CHAMBERLIN.

Figures 1, 2.

- 1.— Anterior region, dorsal view.
- 2.— Same, ventral view.

Amphicteis orphnius CHAMBERLIN.

Figures 3, 4.

- 3.— Anterior region, dorsal view.
- 4.— The same, ventral view.

Amphicteis uncopalea CHAMBERLIN.

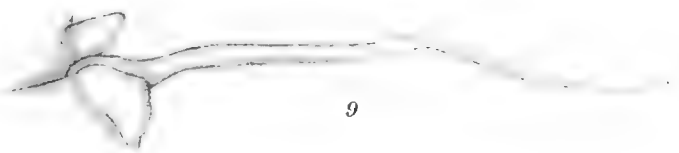
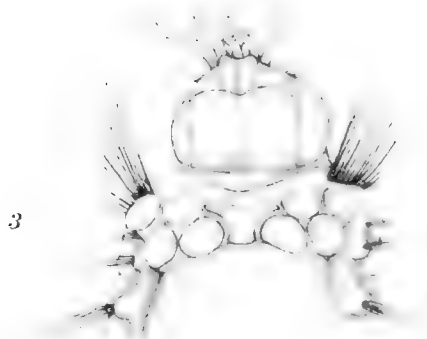
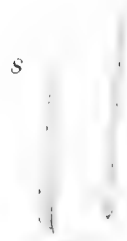
Figures 5, 6.

- 5.— Anterior region, dorsal view.
- 6.— Same, ventral view.

Paiwa abyssi CHAMBERLIN.

Figures 7-9.

- 7.— Anterior region, ventral view.
- 8.— Branchia. $\times 11$.
- 9.— Parapodium from median region of abdomen. $\times 34$.



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PLATE 77.

PLATE 77.

Amphicteis orphnius CHAMBERLIN.

Figures 1, 2.

- 1.—Two of the shorter paleae from above. $\times 67$.
- 2.—Uncinus, seventeenth setigerous somite. $\times 930$.

Amphicteis obscurior CHAMBERLIN.

Figure 3.

- 3.—Uncinus. $\times 930$.

Amphicteis uncopalea CHAMBERLIN.

Figure 4.

- 4.—Uncinus from twelfth somite. $\times 930$.

Pabits deroderus CHAMBERLIN.

Figures 5, 6.

- 5.—Abdominal uncinus, profile view. $\times 1075$.
- 6.—Distal end of thoracic seta. $\times 278$.

Ampharete homa CHAMBERLIN.

Figures 7, 8.

- 7.—Abdominal uncinus. $\times 1075$.
- 8.—Distal end of notopodial thoracic seta. $\times 278$.

Paiwa abyssi CHAMBERLIN.

Figures 9, 10.

- 9.—Ninth parapodium, ventrolateral view. $\times 25$.
- 10.—Uncinus, profile view. $\times 1075$.

Moyanus explorans CHAMBERLIN.

Figures 11, 12.

- 11.—Thoracic uncinus, profile view. $\times 1075$.
- 12.—Distal portion of thoracic seta. $\times 278$.

Sabellides delus CHAMBERLIN.

Figure 13.

- 13.—Uncinus from eleventh setigerous somite. $\times 1075$.



PLATE 78.

PLATE 78.

Paumotella takemoana CHAMBERLIN.

Figures 1-5.

- 1.— Dorsal abdominal seta from caudal region. $\times 260$.
- 2.— Setae of sixth thoracic somite, distal ends. $\times 278$.
- 3.— Abdominal uncinus. $\times 1036$.
- 4.— Dorsal abdominal seta, median region of abdomen. $\times 260$.
- 5.— Portion of branchia in optical section. $\times 58$.

Pomatoceros paumotanus CHAMBERLIN.

Figures 6-9.

- 6.— Portion of thoracic seta, tip broken off. $\times 278$.
- 7.— Thoracic uncinus. $\times 1036$.
- 8.— Lateral view of operculum. $\times 15$.
- 9.— Tip of a branchia. $\times 63$.

Sternaspis maior CHAMBERLIN.

Figure 10.

- 10.— Ventral shield. $\times 3.75$.



PLATE 79.

PLATE 79.

Eupolymnia regnans CHAMBERLIN.

Figures 1-3.

- 1.—Thoracic seta. $\times 225$.
- 2.—Thoracic uncinus. $\times 830$.
- 3.—Abdominal uncinus. $\times 830$.

Eupolymnia insulana CHAMBERLIN.

Figures 4-6.

- 4.—Thoracic seta. $\times 225$.
- 5.—Thoracic uncinus. $\times 860$.
- 6.—Abdominal uncinus. $\times 860$.

Terebella panamena CHAMBERLIN.

Figures 7, 8.

- 7.—Distal portion of thoracic seta. $\times 830$.
- 8.—Thoracic uncinus. $\times 830$.

Nicolea profundi CHAMBERLIN.

Figure 9.

- 9.—Thoracic uncinus. $\times 830$.

Nicolea latens CHAMBERLIN.

Figures 10, 11.

- 10.—Notopodial seta, distal portion. $\times 225$.
- 11.—Abdominal uncinus. $\times 860$.

Nicolea taboguillae CHAMBERLIN.

Figures 12, 13.

- 12.—Outline of right lateral flap of third somite. $\times 20$.
- 13.—Thoracic uncinus, profile view. $\times 830$.



PLATE 80.

PLATE 80.

Nicolea galapagensis CHAMBERLIN.

Figures 1-3.

- 1.—Caudal end, dorsal view. × 20.
- 2.—Outline of right lateral flap of third somite. × 20.
- 3.—Thoracic uncinus. × 860.

Thelepus pericensis CHAMBERLIN.

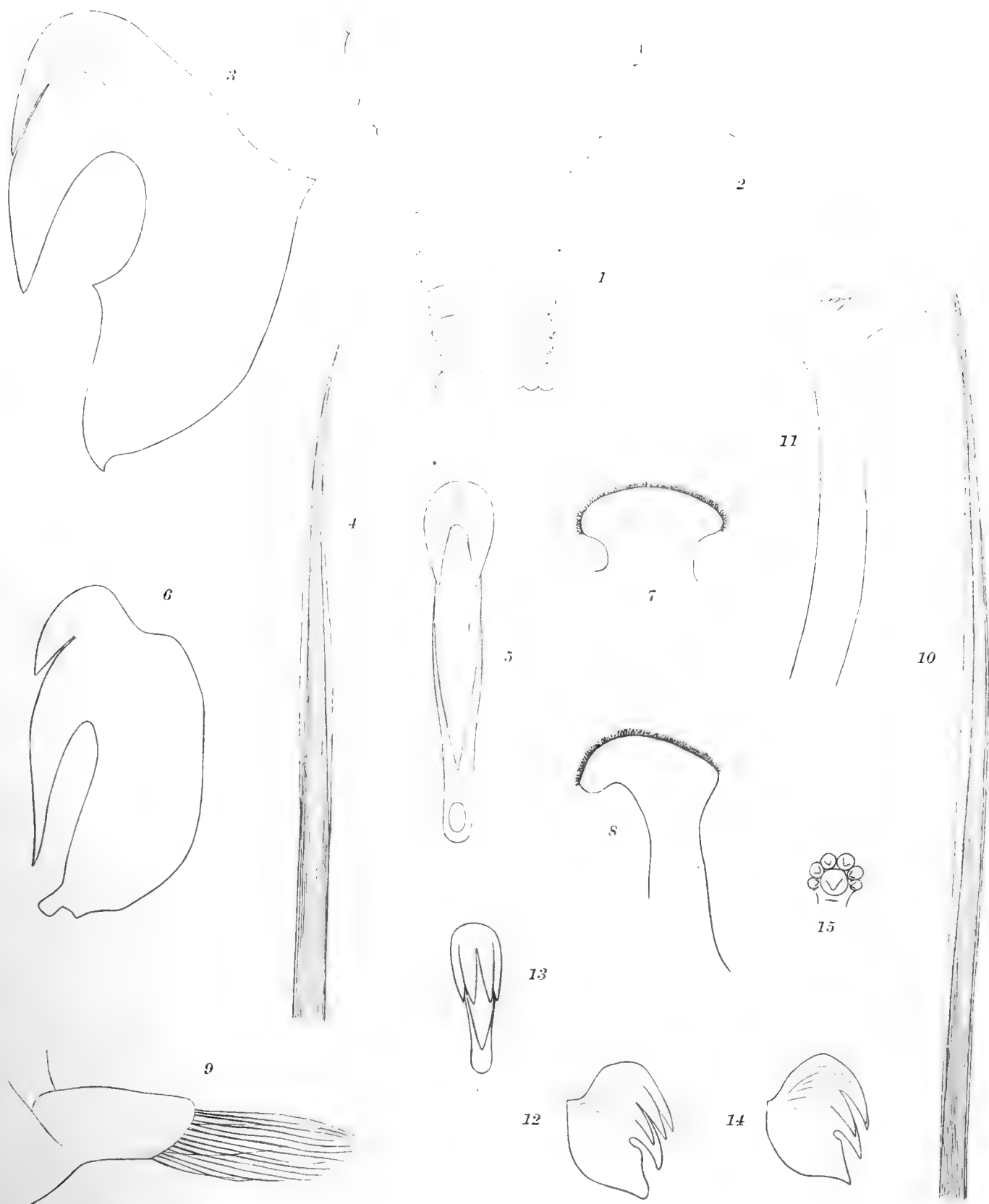
Figures 4-6.

- 4.—Anterior seta, distal portion. × 225.
- 5.—Anterior uncinus, frontal view. × 860.
- 6.—The same, profile. × 860.

Terebellides eurystethus CHAMBERLIN.

Figures 7-15.

- 7.—Pinnula of anterior abdominal region. × 51.
- 8.—Pinnula of posterior abdominal region. × 51.
- 9.—Fourteenth left notopodium, anterior view. × 22.
- 10.—Seta of tenth thoracic somite, extreme tip missing. × 225.
- 11.—Thoracic uncinus. × 860.
- 12.—Abdominal uncinus, profile view. × 860.
- 13.—Abdominal uncinus, frontal view. × 860.
- 14.—Another abdominal uncinus. × 860.
- 15.—Crown of teeth of uncinus viewed nearly from direction of points of teeth. × 860.



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